AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 13. (Cancelled)

14. (Currently Amended) A method for promoting clearance ~~providing a protective effect~~ in vivo against challenge by a meningitis etiologic virus and/or bacteria, said method comprising administering an effective amount of a composition, said composition comprising a monoclonal antibody or binding fragment thereof which binds to a Meningitis Related Homologous Antigenic Sequence shared by viral and/or bacterial meningitis etiological agents.

15. (Original) A method according to claim 14, wherein said composition is administered intravenously.

16. - 17. (Cancelled)

18. (Currently Amended) The method of claim 14, wherein said meningitis-causing organism is a bacterium ~~bacteria~~.

19. (Original) The method of claim 18 wherein said bacteria is *H. influenzae* type b.

20. (Currently Amended) The method of claim 14 wherein said MRHAS is selected from the group consisting of:

(a) the amino acid sequence of the structural polyprotein of a strain of Rubella virus that corresponds to MRHASRV-2 as set forth in SEQ ID NO: 5;

(b) the amino acid sequence of the structural polyprotein of the HIV envelope gp41 protein precursor that corresponds to MRHASHIV-2 as set forth in SEQ ID NO: 16;

(c) the amino acid sequence of the structural polyprotein of a *Hemophilus influenzae* p28

lipoprotein E precursor protein that corresponds to MRHASHI-1 as set forth in SEQ ID NO: 19;

(d) the amino acid sequence of the structural polyprotein of a *Streptococcus* ***pneumoniae*** surface protein (SpA) that corresponds to MRHASSP-1 as set forth in SEQ ID NO: 25;

(e) the amino acid sequence of the structural polyprotein of a *Listeria monocytogenes* p60 precursor protein that corresponds to MRHASLM-4 as set forth in **SEQ ID NO:** 34; and

(f) the amino acid sequence of the native carboxyl septapeptide MCP-1 that corresponds to MRHASMCP-1 as set forth in SEQ ID NO: 37;

(g) the amino acid sequence of a native carboxyl septapeptide MCP-3 that corresponds to MRHASMCP-3 as set forth in SEQ ID NO: 40;

(h) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA102-AA108 of said protein of the M33 strain of Rubella virus as set forth in SEQ ID NO:1;

([1]) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA89-AA95 of said protein of the M33 strain of Rubella virus as set forth in SEQ ID NO:!;

(j) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA313-AA319 of said protein of the M33 strain of Rubella virus as set forth in SEQ ID NO: 1;

(k) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA103-AA109 of said protein of the Therien strain of Rubella virus as set forth in SEQ ID NO:8;

([1]) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA90-AA96 of said protein of the Therien strain of Rubella virus as set forth in SEQ ID NO:8;

(m) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA314-AA320 of said protein of the Thorion strain of Rubella virus as set forth in SEQ ID NO:8;

(n) the amino acid sequence of the Gag Polyprotein of an isolate of the HIV-1 that corresponds to AA145-AA151 of the Gag Polyprotein of the LV isolate of HIV-1 as set forth in SEQ ID NO: 11;

(o) the amino acid sequence of the Envelope Polyprotein Precursor of an isolate

of the HIV-1 that corresponds to AA655 to AA661 of the Envelope Polyprotein Precursor of the LAV-la isolate of HIV-1 as set forth in SEQ ID NO: 14;

(P) the amino acid sequence that corresponds to AA99-AA105 of the Lipoprotein E Precursor of Haemophilus influenzae as set forth in SEQ ID NO: 17;

(q) the amino acid sequence that corresponds to AA1 to AA5 of the Opacity-Related Protein POPM3 of Neisseria meningitides as set forth in SEQ ID NO:20;

(r) the amino acid sequence that corresponds to Al23 to AAl29 of the Pneumococcal Surface Protein A of Streptococcus pneumoniae as set forth in SEQ ID NO:23;

(s) the amino acid sequence that corresponds to AA151-AA157 of the Protein P60 Precursor of Listeria monocytogenes as set forth in SEQ ID NO:26;

(t) the amino acid sequence that corresponds to AA181-AA187 of the Protein P60 Precursor of Listeria monocytogenes as set forth in SEQ ID NO:26;

(u) the amino acid sequence that corresponds'to AA249-AA255 of the Protein P60 Precursor of Listeria monocytogenes as set forth in SEQ ID NO:26;

(v) the amino acid sequence that corresponds to A292-AA298 of the Protein P60 Precursor of Listeria monocytogenes as set forth in SEQ ID NO:26;

~~(w) the amino acid sequence of a variant of the chemokine human Monocyte Chemoattractant Factor hIVICP-1, that corresponds to AA93-AA99 of hMCP-1 as set forth~~ **in SEQ ID** ~~NO:35; and~~

~~(x) the amino acid sequence of the chemokine hMCP-3, that corresponds to AA61-AA67 of hMCP-3 as set forth in SEQ ID NO: 38.~~

21. (Cancelled)

22. (Original) The method of claim 14 wherein said composition is the SP8 antibody or binding fragment thereof.

23. (Original) The method of claim 14 wherein said Meningitis Related Homologous Antigenic Sequence is QQQPKA.

24. - 25. (Cancelled).

26. (New) An isolated polypeptide comprising (A) a first amino acid sequence at the amino terminus of said polypeptide wherein said first amino acid sequence corresponds to an amino acid sequence of the carboxy_terminus of a chemokine, and (B) a second amino acid corresponding to the amino acid sequence of a hapten.

27. (New) The isolated polypeptide of claim 26, wherein said chemokine is murine chemokine and said hapten is an amino acid sequence corresponding to the Meningitis Related Homologous Antigenic Sequences (MRHAS).

28. (New) The isolated polypeptide of claim 27, having theamino acid sequence: VVFVTKLKREVCADPKKEWVQTYIKNLDR--QQQPPKA.

29. (New) A vaccine for preventing disease in a murine host comprising (A) a polypeptide according to claim 26, and (B) a pharmaceutically or veterinarilly acceptable carrier, diluent or excipient.

30. (New) The vaccine according to claim 29, wherein said chemokine is a murine chemokine and said hapten is an amino acid sequence corresponding to the MRHAS.

31. (New) The vaccine according to claim 30, wherein said polypeptide has the amino acid sequence: VVFVTKLKREVCADPKKEWVQTYIKNLDR--QQQPPKA.

32. (New) A method of preventing infection of a murine recipient by a meningitis-causing organism comprising administering to said human an amount of a vaccine

according to claim 30 which is sufficient to elicit a protective immune response.

33. (New) A method of preventing infection of a murine recipient by meningitis-causing organism comprising administering to said human an amount a vaccine according to claim 31 which is sufficient to elicit a protective immune response.

34. (New) A composition comprising an antibody that binds a polypeptide containing a MRHAS.

35. (New) A process for raising antibodies to meningitis etiologic agents which comprises administering to a host a protective amount of a peptide having the formula:

a - - - X - - - b

wherein:

X is a sequence of at least 7 amino acids taken as a block selected from the group comprising:

(i) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{102} - - AA_{108} of said protein of the M33 strain of Rubella virus as set forth in FIGURE 1;

(ii) the amino acid seqquence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{89} - - AA_{95} of said protein of the M33 strain of Rubella virus as set forth in FIGURE 1;

(iii) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{313} - - AA_{319} of said protein of the M33 strain of Rubella virus as set forth in FIGIGURE 1;

(iv) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{103}—AA_{109} of said protein of the Therien strain of

Rubella virus as set forth in FIGURE 2;

(v) the am o acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{50} - -AA_{96} of said protein of the Therien strain of Rubella virus as set forth in FIGURE 2;

(vi) the amino acid sequence of the Structural Polyprotein of a strain o Rubella virus that corresponds to AA_{314} –AA_{320} of said protein of the Therien strain of Rubella virus as set fort in FIGURE 2;

(vii) the amino acid sequence of the Gag Polyprotein of an isolate of the HIV-1 that corresponds to AA_{145} - - AA_{151} of the Gag Polyprotein of the LV isolate of HIV-1 as set forth in FIGURE 3;

(viii) the amino acid sequence of the Envelope Polyprotein Precursor of an isolate of the HIV-1 that corresponds to AA_{655} - - AA_{661} of the Envelope Polyprotein Precursor of the LAV-la isolate of HIV-1 as set forth in FIGURE 4;

(ix) the amino acid sequence that corresponds to AA_{99} –AA_{105} of the Lipoprotein E Precursor of *Haemophilus influenzae* as set forth in FIGURE 5;

(x) the amino acid sequence that corresponds to AA_1 - - AA_5 of the Opacity-Related Protein POPM3 of Neisseria meningitidis as set forth in FIGURE 6;

(xi) the amino acid sequence that corresponds to AA_{423}-- AA_{429} of the Pneumococcal Surface Protein A of *Streptococcus pneumoniae* as set forth in FIGURE 7;

(xii) the amino acid sequ nce that corresponds to PLA_{151}--AA_{157} of the Protein P60 Precursor of Listeria *monocytogenes* as set forth in FIGUR 8;

(xiii) the amino acid sequence that corresponds to AA181---AA187 of the Protein P60 Precursor of Listeria monocytogenes as et forth in FIGURE 8;

(xiv) from the amino acid sequence of that corresponds to AA249 - - AA255 of the Protein P60 Precursor of Listeria monocytogenes as set forth in FIGURE 8;

(xv) from the amino acid sequence that corresponds to AA292 - - AA298 of the Protein P60 Precursor of Listeria monocytogenes as set forth in FIGURE 8;

(xvi) from any amino acid sequence present within a protein that is homologous to members of the MRHAS family;

with said block maintaining the sequence in the N terminus to C terminus direction of the native amino acid sequence and analogue thereof, said analogues resulting from conservative substitutions in or modifications to the native amino acid sequence block;

a is selected from the group consisting of:

(i) an amino terminus;

(ii) one to eight amino acids taken as a block from and maintaining the sequence and N terminus to C terminus direction of that portion of the native amino acid sequence of the protein immediately N-terminal to said X or conservative substitutions in or modifications thereto; and

(iii) a substituent effective to facilitate coupling of the peptide to another moiety; and

b is selected from the group consisting of:

(i) a carbox terminus;

(ii) one to eight amino acids taken as a block from and maintaining the sequence and N terminus to C terminus direction of that portion of the native amino acid sequence of the protein immediately C-terminal to said X or conservative substitutions in or modifications thereto; and

(iii) a substituent effective to facilitate coupling of the peptide to another moiety.

36. (New) A meningitis vaccine for a murine comprising a protective amount of a peptide having the formula:

a---X---b

wherein:

X is a sequence of at least 7 amino acids taken as a block selected from th group comprising:

(i) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{102} - - AA_{108} of said protein of the M33 strain of Rubella virus as set forth in FIGURE 1;

(ii) the amino acid equence of the Structural Polyprotein of a strain of Rube la virus that corresponds to AA89--AA95 of said protein of the M33 strain of Rubella -virus as set forth in FIGURE 1;

(iii) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{313}- -AA_{319} of said protein of the M33 strain of Rubella virus as set forth in FIGURE 1;
(iv) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{103}- -AA_{109} of said protein of the Therien strain of Rubella virus as set forth in FIGURE 2;

(v) the amino acid sequence of the Structural _ Polyprotein of a train of Rubella virus that corresponds to AA_{90}- -AA_{96} of said protein of the Therien strain of Rubella virus as set forth in FIGURE 2;

(vi) the amino acid sequence of the Structural Polyprotein of a strain of Rubella virus that corresponds to AA_{314} -AA_{320} of said protein of the Therien strain of Rubella virus as set forth in FIGURE 2;

(vii) the amino acid sequence of the Gag Polyprotein of an isolate of the HIV-1 that corresponds to AA_{145}- -AA_{151} of the Gag Polyprotein of the LV isolate of HIV-1 as set forth in FIGURE 3;

(viii) the amino acid sequence of the Envelope Polyprotein Precursor of an isolate of the HIV-1 that corresponds to AA_{655} to AA661 of the Envelope Polyprotein Precursor of

the LAV-la isolate of HIV-1 as set forth in FIGURE 4;

(ix) the amino acid se ence that corresponds to AA_{99} - AA_{105} of the Lipoprotein E Precursor of Haemophilus influenzae as set for 'h in FIGURE 5;

(x) the amino acid segue ce that corresponds to AA_1 to AA_5 of the Opacity-Related Protein POPM3 of Neisseria meningitidis as set forth in FIGURE 6;

(xi) the amino acid sequence that corresponds to AA423 to AA429 of the Pneumococcal Surface Protein A of *Streptococcus pneumoniae* as set forth in FIGURE 7;

(xii) the amino acid sequence that corresponds to AA_{151}—AA_{157} of the Protein P60 Precursor of *Listeria monocytogenes* as set forth in FIGURE 8;

(xiii) the amino acid sequence that corresponds to AA_{181}--AA_{187} o the Protein P60 Precursor of *Listeria monocytogenes* as set forth in FIGURE 8;

(xiv) from the amino acid sequence of that corresponds to AA $_{249}$ -AA_{255} of the Protein P60 Precursor of *Listeria monocytoges* as set forth in FIGURE 8;

(xv) from the amino acid sequence that corresponds to AA_{292}-- AA_{298} of the Protein P60 Precursor of F4 *Listeria monocytogenes* as set forth in FIGURE 8;

(xvi) from the amino acid sequence of a variant of the chemokine human onocyte Chemoattractant Factor hMCP-1, that corresponds to AA93--AA99 of hMCP-1 as set forth in FIGURE 9;

(xii) from the amino acid sequence of the chmokine hMCP-3, that corresponds to AA_{61} - - AA_{67} of hMCP-3 as set forth in FIGURE 10; and

(xviii) from any amino acid sequence present within a protein that is homologous to members of the MRHAS family;

with said block maintaining the sequence in the N terminus to C terminus direction of the native amino acid sequence and analogue thereof, said analogues resulting from conservative substitutions in or modifications to the native amino acid sequence block;

a is selected from the group cons sting of:

(i) an amino terminus;

(ii) one to eight amino acids taken as a block from and maintaining the sequence and N terminus to C terminus direction of that portion of the native amino acid sequence of the protein immediately N-terminal to said X or conservative substitutions in or modifications thereto; and

(ii) a substituent effective to facilitate coupling of the peptide to another moiety; and

b is selected from the group consisting of:

(i) a carboxy t minus;

(ii) one to eight amino acids taken as a block from and maintaining the sequence and N terminus to C terminus direction of that portion of the native amino acid sequence of the protein immediately C- terminal to said X or conservative substitutions in or modifications thereto; and

(iii) a substituent effective to facilitate coupling of the peptide to antoher moiety.

37. A method for protecting a murine recipient against disease caused by bacterial and/or viral meningitis etiologic agents comprising administering an effective dose of the vaccine according to claim 30.

38. A method for protecting a human against disease caused by bacterial and/or viral meningitis etiologic agents comprising administering an effective dose of the composition according to claim 35.